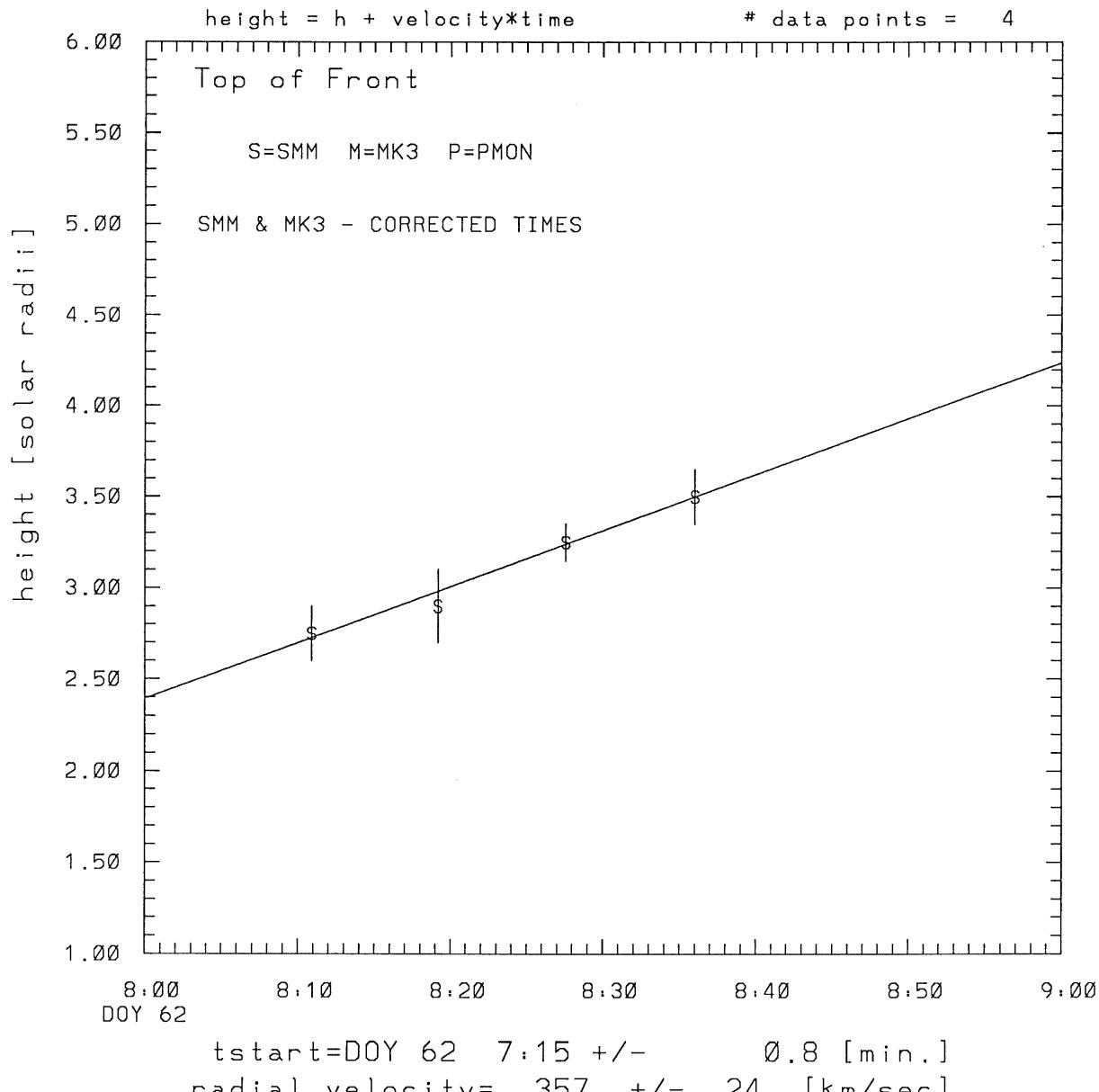
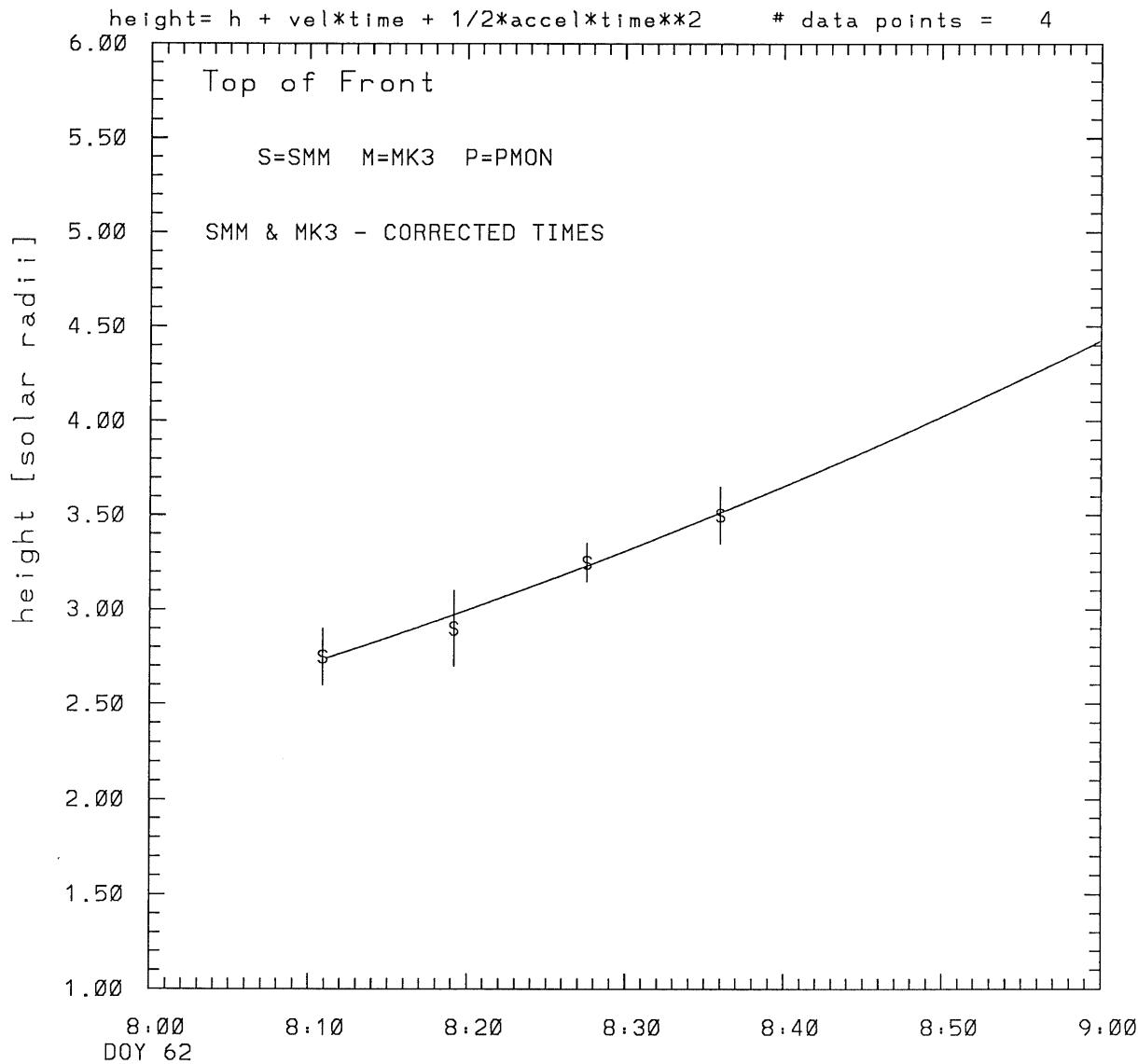


SMM C/P 1989 DOY 62 270 +/- 0 degrees

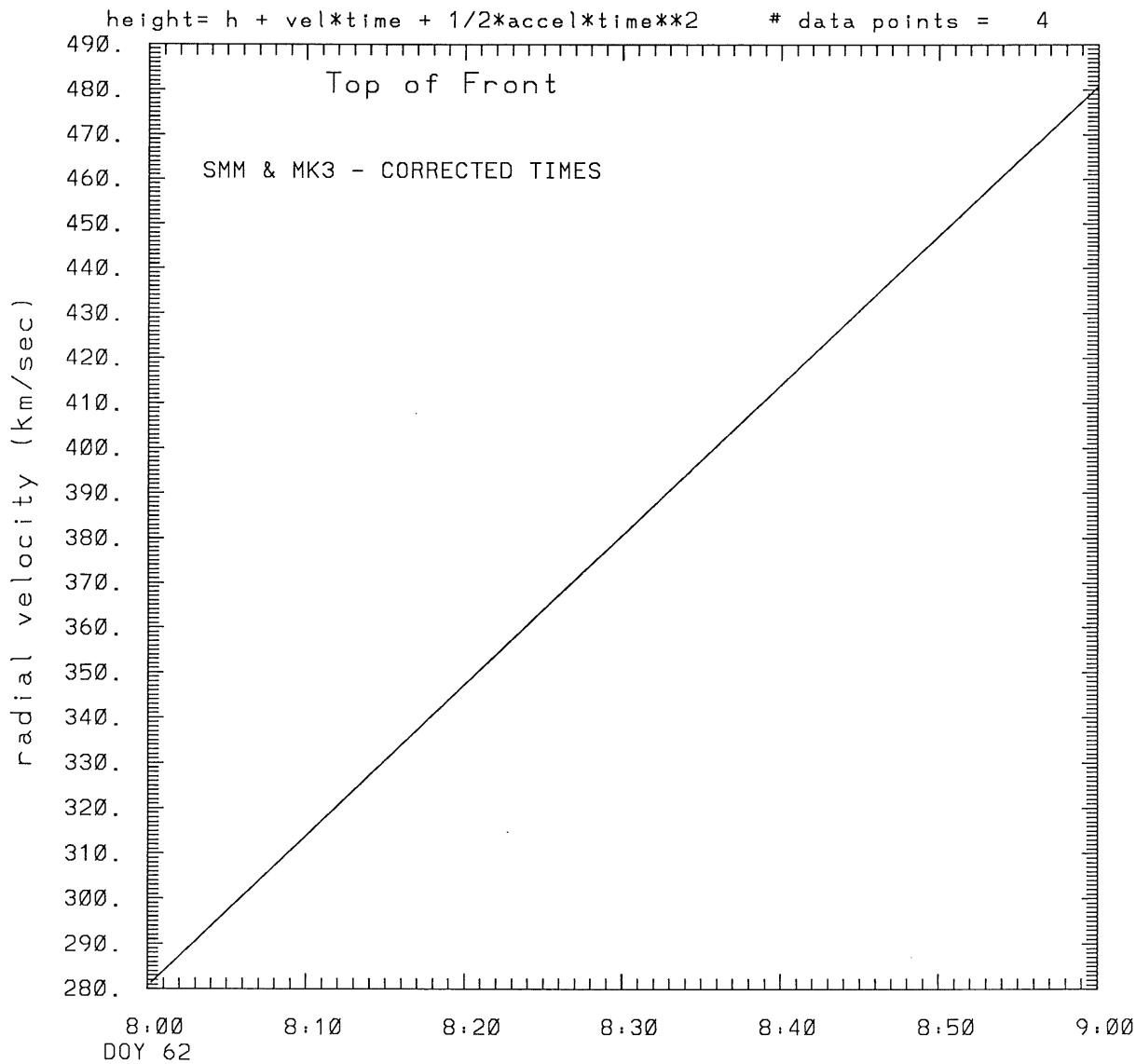


SMM C/P 1989 DOY 62 270 +/- 0 degrees



tstart=DOY 62 6:36 from derivative=0
Event begins at 1.44 Solar Radii
radial acceleration= 0.0556 +/- 0.1150 [km/sec**2]

SMM C/P 1989 DOY 62 270 +/- 0 degrees



tstart=DOY 62 6:36 from derivative=0
Event begins at 1.44 Solar Radii
radial acceleration=0.556E-01 km/sec**2

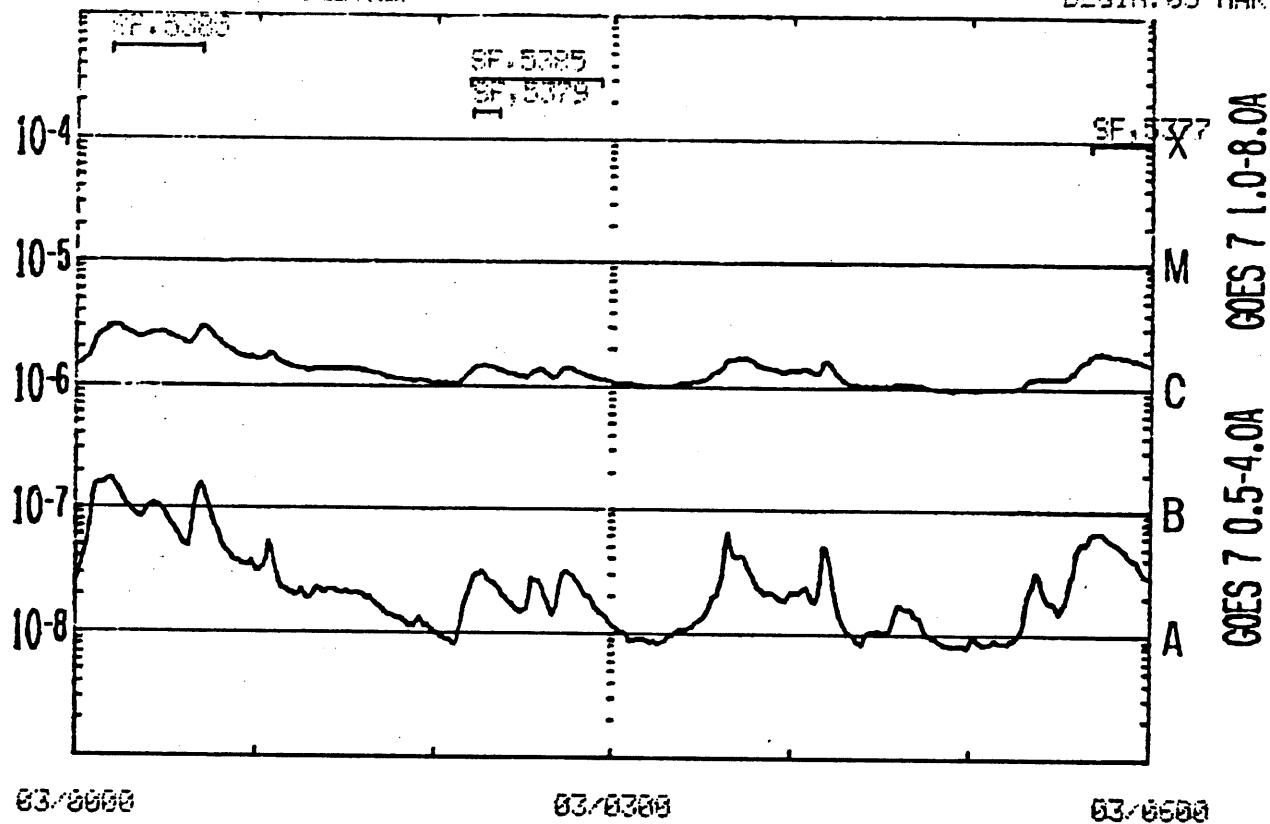
1989 Day 062

END AND OF EQUAL DATA TOGETHER

TOP
Set.

BEGIN: 03 MAR 89

Watts meter⁻²



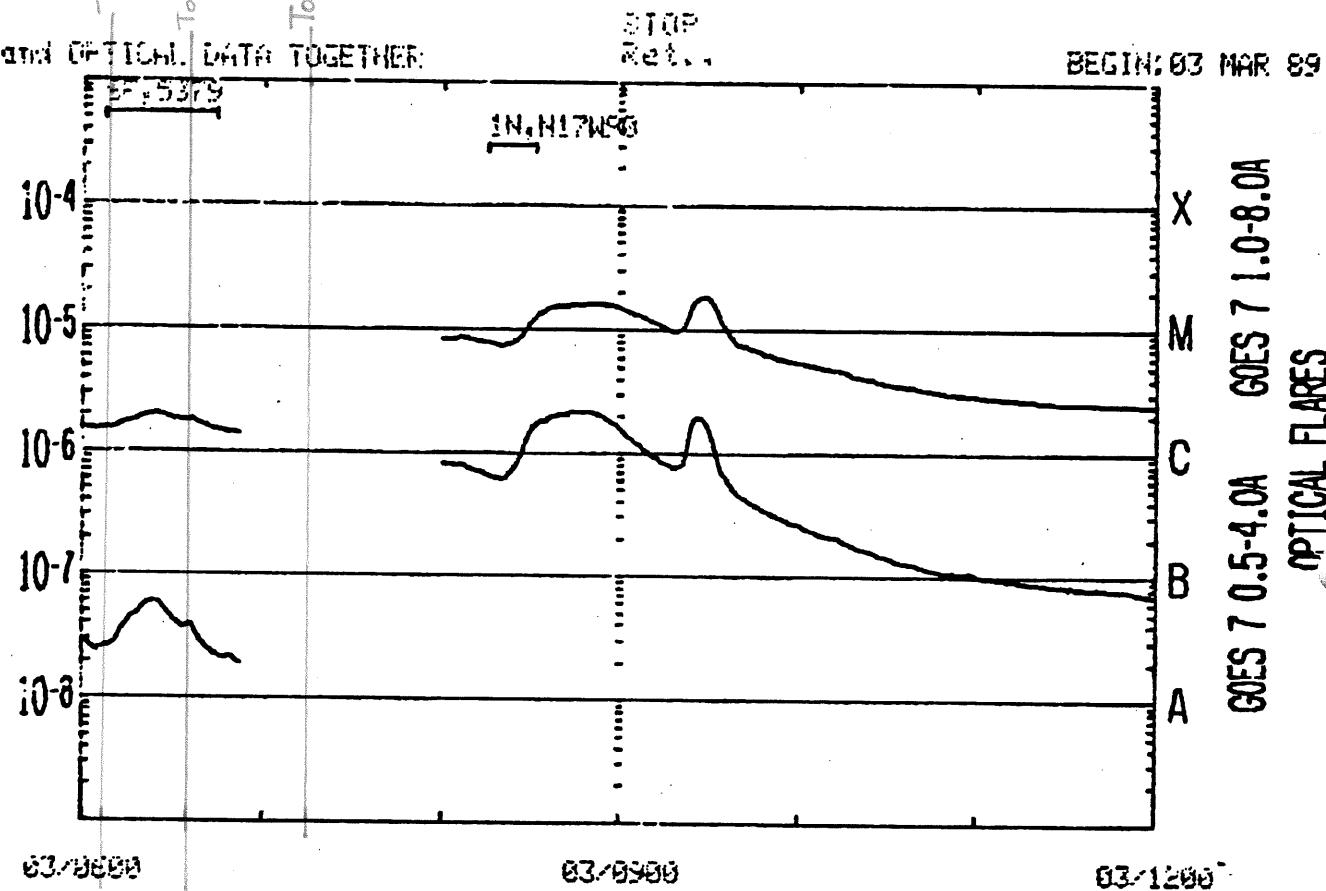
GOES-7 1 MIN DATA: OPTICAL FLARE DUR. IMP. REGION

SAA's
NIGHT
RUN: 2055UT
8 MAR 89

See next plot

1989 Day 062

ARRAY and OPTICAL DATA TOGETHER



GOES-7 1 MIN DATA: OPTICAL FLARE DUR. IMP. REGION

RUN: 213PUT
8 MAR 89

This is a 1 order run

INPUT:

year	doy	time	radii	radius	angle	angle	datatype
1989	62	8:10:54	2.75	+/- 0.15	270.0	+/- 0.5	SMM
1989	62	8:19:10	2.90	+/- 0.20	270.0	+/- 0.5	SMM
1989	62	8:27:35	3.25	+/- 0.10	270.0	+/- 0.5	SMM
1989	62	8:36: 1	3.50	+/- 0.15	270.0	+/- 0.5	SMM

Structure being measured:

Top of Front

OUTPUT:

START TIME:

Event began at t = 0 + -0.452E+02 +/- 0.820E+00 [minutes]

In more convenient units:

Event began at DOY 62 7:15 +/- 0.820E+00 [minutes]

Origin defined at DOY 62 8: 0

RADIAL INFORMATION:

RADIAL VELOCITY = 357. +/- 24. km/sec

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = 0.239E+01 +/- 0.539E-01 [solar radii]
c(2) = 0.308E-01 +/- 0.205E-02 [radii/min]
c(2) = 0.357E+03 +/- 0.238E+02 [km/sec]
c(3) = 0.000E+00 +/- 0.000E+00 [radii/min**2]
c(3) = 0.000E+00 +/- 0.000E+00 [km/sec**2]

The computed ERRORS in coefficients [BEVINGTON] are:

error in c(1)= 0.80922E-01 [radii] see Bevington pg. 114

error in c(2)= 0.32086E-02 [radii/min] see Bevington pg. 114

ANGULAR INFORMATION:

ANGULAR VELOCITY = 0.0000E+00 +/- 0.0000E+00[radians/sec]

The computed ANGULAR coefficients and errors FROM NLLST2 are:

a(1) = 270. +/- 0. [degrees]
a(2) = 0.000E+00 +/- 0.000E+00 [degrees/min]
a(2) = 0.000E+00 +/- 0.000E+00 [rad/sec]
a(3) = 0.000E+00 +/- 0.000E+00 [degrees/min**2]
a(3) = 0.000E+00 +/- 0.000E+00 [rad/sec**2]

THE TANGENTIAL AND TOTAL VELOCITIES AT EACH DATA POINT ARE:

The TANGENTIAL velocity at 8:10 = 0. km/sec

The TOTAL velocity at 8:10 = 357. km/sec

The TANGENTIAL velocity at 8:19 = 0. km/sec

The TOTAL velocity at 8:19 = 357. km/sec

The TANGENTIAL velocity at 8:27 = 0. km/sec

The TOTAL velocity at 8:27 = 357. km/sec

The TANGENTIAL velocity at 8:36 = 0. km/sec

The TOTAL velocity at 8:36 = 357. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 0.34

Standard Deviation in start time measurement = 0.937E+01

Error in time = 0.27622E+01 using best fit method

See Taylor Error Analysis [Univ of Colorado] pg.78

Value of reduced Chi Squared returned from nllst2 = 0.124E-02

Reduced Chi Squared = 0.700E-02

Chi Squared = 0.140E-01

The probability for exceeding chi square = 0.999E+00

The correlation coefficient = 0.990E+00

The probability that no LINEAR correlation exists between the variables = 0.9648E-02

SEE BEVINGTON "Data Reduction and Error Analysis" [1969]

This is a 2 order run

INPUT:

year	doy	time	error in radii	error in radius	angle	angle	datatype
1989	62	8:10:54	2.75	+/- 0.15	270.0	+/- 0.5	SMM
1989	62	8:19:10	2.90	+/- 0.20	270.0	+/- 0.5	SMM
1989	62	8:27:35	3.25	+/- 0.10	270.0	+/- 0.5	SMM
1989	62	8:36: 1	3.50	+/- 0.15	270.0	+/- 0.5	SMM

Structure being measured:

Top of Front

OUTPUT:

START TIME:

tstart=DOY 62 6:36 from derivative = 0

Event begins at 1.44 Solar Radii

Origin defined at DOY 62 8: 0

RADIAL INFORMATION:

RADIAL ACCELERATION = 0.556E-01 +/- 0.115E+00 km/sec**2

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = 0.246E+01 +/- 0.147E+00 [solar radii]
c(2) = 0.242E-01 +/- 0.138E-01 [radii/min]
c(2) = 0.281E+03 +/- 0.160E+03 [km/sec]
c(3) = 0.144E-03 +/- 0.297E-03 [radii/min**2]
c(3) = 0.556E-01 +/- 0.115E+00 [km/sec**2]

The computed ERRORS in coefficients [BEVINGTON] are:

Approximate error in c(1) = 0.27348E+00 [radii] Bevington pg 154 (8-30)

Exact error in c(1) = 0.61376E-01 [radii] Bevington pg 154 (8-28)

Approximate error in c(2) = 0.26001E-01 [radii/min] Bevington pg 154 (8-30)

Exact error in c(2) = 0.65928E-02 [radii/min] Bevington pg 154 (8-28)

Approximate error in c(3) = 0.54710E-03 [radii/min**] Bevington pg 154 (8-30)

Exact error in c(3) = 0.14161E-03 [radii/min**] Bevington pg 154 (8-28)

ANGULAR INFORMATION:

ANGULAR ACCELERATION= 0.0000E+00 +/- 0.0000E+00[radians/sec**2]

The computed ANGULAR coefficients and errors FROM NLLST2 are:

a(1) = 270. +/- 0. [degrees]
a(2) = 0.000E+00 +/- 0.000E+00 [degrees/min]
a(2) = 0.000E+00 +/- 0.000E+00 [rad/sec]
a(3) = 0.000E+00 +/- 0.000E+00 [degrees/min**2]
a(3) = 0.000E+00 +/- 0.000E+00 [rad/sec**2]

THE TANGENTIAL AND TOTAL VELOCITIES AT EACH DATA POINT ARE:

The TANGENTIAL velocity at 8:10 = 0. km/sec

The TOTAL velocity at 8:10 = 317. km/sec

The TANGENTIAL velocity at 8:19 = 0. km/sec

The TOTAL velocity at 8:19 = 345. km/sec

The TANGENTIAL velocity at 8:27 = 0. km/sec

The TOTAL velocity at 8:27 = 373. km/sec

The TANGENTIAL velocity at 8:36 = 0. km/sec

The TOTAL velocity at 8:36 = 401. km/sec

The following info is for estimating goodness of the fit

Fit is ok [ier=1]

Standard Deviation in the height = 0.34

Standard Deviation in start time measurement = 0.937E+01

Value of reduced Chi Squared returned from nllst2 = 0.166E-02

Reduced Chi Squared = 0.122E-01

Chi Squared = 0.122E-01

The probability for exceeding chi square = 0.967E+00

For a second order fit 3 correlation coefficients are given:

(Using equation of motion: $r = a + bt + at^{**2}$)

The correlation between the data and the term linear in time = 0.9227E+00

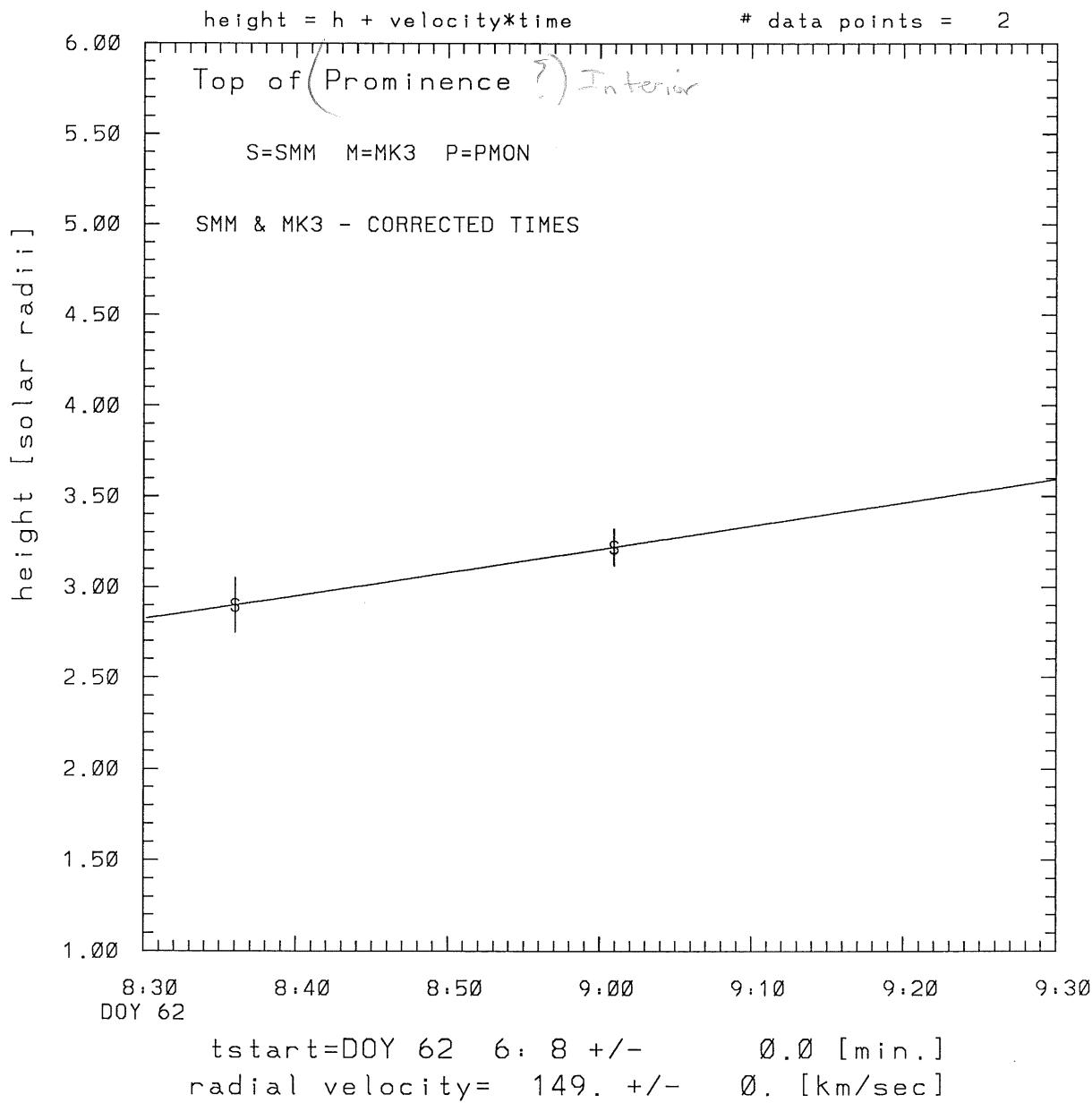
The correlation between the data and the time **2 term = 0.8893E+00

The correlation between the data and the complete equation of motion = 0.9784E+00

SEE BEVINGTON "Data Reduction and Error Analysis" [1969]



SMM C/P 1989 DOY 62 261 +/- 0 degrees



This is a 1 order run

INPUT:

year	doy	time	radii	radius	error in radii	angle	angle	error in angle	datatype
1989	62	8:36: 1	2.90	+/- 0.15	261.0	+/- 0.5	SMM		
1989	62	9: 0:57	3.22	+/- 0.10	261.0	+/- 0.5	SMM		

Structure being measured:

Top of Prominence

OUTPUT:

START TIME:

Event began at $t = 0 + -0.142E+03 +/ - 0.000E+00$ [minutes]
In more convenient units:

Event began at DOY 62 6: 8 +/- 0.000E+00 [minutes]

Origin defined at DOY 62 8:30

RADIAL INFORMATION:

RADIAL VELOCITY = 149. +/- 0. km/sec

The computed RADIAL coefficients and errors FROM NLLST2 are:

c(1) = 0.282E+01 +/- 0.380E-06 [solar radii]
c(2) = 0.128E-01 +/- 0.146E-07 [radii/min]
c(2) = 0.149E+03 +/- 0.170E-03 [km/sec]
c(3) = 0.000E+00 +/- 0.000E+00 [radii/min**2]
c(3) = 0.000E+00 +/- 0.000E+00 [km/sec**2]

ANGULAR INFORMATION:

ANGULAR VELOCITY = 0.0000E+00 +/- 0.0000E+00 [radians/sec]

The computed ANGULAR coefficients and errors FROM NLLST2 are:

a(1) = 261. +/- 0. [degrees]
a(2) = 0.000E+00 +/- 0.000E+00 [degrees/min]
a(2) = 0.000E+00 +/- 0.000E+00 [rad/sec]
a(3) = 0.000E+00 +/- 0.000E+00 [degrees/min**2]
a(3) = 0.000E+00 +/- 0.000E+00 [rad/sec**2]

THE TANGENTIAL AND TOTAL VELOCITIES AT EACH DATA POINT ARE:
The TANGENTIAL velocity at 8:36 = 0. km/sec
The TOTAL velocity at 8:36 = 149. km/sec

The TANGENTIAL velocity at 9: 0 = 0. km/sec
The TOTAL velocity at 9: 0 = 149. km/sec

The following info is for estimating goodness of the fit

Number data points = number of coefficients. No error analysis is possible.

Correlation coefficient is not computable!